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ABSTRACT

A comparison of the short-term economic costs of Mohawk Valley Community College (MVCC) to Oneida County (New York) with the short-term economic benefits to Oneida County for the 1977-78 MVCC fiscal year revealed that MVCC had an annual operating budget of approximately ten million dollars. Of this, 13.41% or $1,330,738 was contributed by the county; 39.78% came from state aid and 29.38% from student tuition. In contrast, the total MVCC-related Oneida County business volume came to $34,460,721. This includes direct college purchases from local business ($1,165,976), monies spent by the faculty-student association ($134,424), local health insurance payments ($179,990), student, staff, and visitor expenditures ($17,664,455), local business volume stimulated by individual spending related to MVCC ($11,486,907) and local purchases by local businesses in support of MVCC-related business ($3,828,969). Other areas investigated by this impact study were college-related local population, including both employees and students; impact on local employment and income; MVCC capital spending; MVCC costs and benefits to the Oneida County government; effects of MVCC's hypothetical non-existence in the county; and implications for the future. A major part of the study report is devoted to the methods used in data collection and in the economic analysis. (MB)

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THE ECONOMIC IMPACT of MOHAWK VALLEY COMMUNITY COLLEGE upon ONEIDA COUNTY

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CHAPTER 1 - AN OVERVIEW OF THE ECONOMIC IMPACT

PURPOSE OF THE COLLEGE

Mohawk Valley Community College is an educational institution founded and perpetuated for the purpose of educating students to become more productive citizens who can participate meaningfully in our democratic processes. The benefits of MVCC accrue to: 1) The individual in terms of greater realization of personal potential, greater productivity and earnings, and a greater awareness and understanding of the world in which he or she lives; 2) The community in the form of a more enlightened citizenry, civic contributions from capable citizens, and the political participation necessary in a democratic society; 3) Business in the form of an educated work force that fulfills employment demands, and innovative managers who create and expand businesses.

The impact of these comprehensive benefits to the community are difficult to enumerate and impossible to measure. The monetary cost of education cannot be compared to the immeasurable benefits of individual self-development, community service, and local business creation and expansion. However, we are all aware that the educational services provided by Mohawk Valley Community College have a precise monetary cost. This cost to Oneida County, the sponsor of MVCC, is $1,330,738 annually. As county taxpayers we help pay this cost, and as responsible citizens, we question the benefits of this expenditure. As

individuals we all use different value systems to judge the comprehensive worth of a college education. This study does not try to place a monetary value upon this education; however, there are some incidental benefits to the community that have measurable monetary values. Mohawk Valley Community College spends $1,165,976 in Oneida County for purchases of goods and services from local businesses. Certainly this expenditure creates jobs and incomes in Oneida County. The purpose of MVCC is education; but in accomplishing that purpose, MVCC generates benefits that accrue to the community.

PURPOSE OF THE STUDY

This study compares the short-run economic costs of MVCC to Oneida County with the short-run economic benefits to Oneida County for the 1977-78 MVCC fiscal year. In this chapter we are presenting some of the results of our economic study. A detailed explanation of how these results were achieved is made in Chapter 2. The economic study is based upon procedures developed for the American Council on Education and documented in Estimating the Impact of a College or University on the Local Economy by John Caffrey and Herbert H. Isaacs.[1] These procedures and models have been used by many other similar community colleges such as Broome County Community College,[2]

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[1]John Caffrey and Herbert H. Isaacs, Estimating the Impact of a College or University on the Local Economy, American Council on Education, Washington, 1971.

[2]R. Romano and N. Herbert, The Economic Impacts of the College on the Local Economy -- Broome County Community College.

Onondaga Community College[3], and Genesee Community College[4]. The results we have obtained in our study of Mohawk Valley Community College are consistent with the results at these other colleges.

SOURCES OF COLLEGE REVENUE

Mohawk Valley Community College has an annual operating budget of approximately ten million dollars. As previously mentioned, Oneida County contributes $1,330,738 or 13.41 percent of MVCC's operating budget. Another source of revenue for MVCC is student tuition of $2,915,724 which accounts for 29.38 percent of the budget. The largest source of revenue is $3,947,517 of state aid, which is 39.78 percent of the budget. A summary is shown in Table 1:

TABLE 1

MVCC 1977-78 REVISED OPERATING BUDGET

Student Tuition	2,915,724	29.38
State Aid	3,947,517	39.78
Oneida County Contribution	1,330,738	13.41
Other Counties Contribution	536,803	5.41
Federal Aid	705,670	7.11
Other Income	242,160	2.44
From Fund Balance	244,162	2.46
Operating Budget	$9,922,774	100.00%

[3]Jamel Hassan, The College and the County, Hassan Management Consultants, 1977.

[4]Jamel Hassan, The Economic Impact of Genesee Community College on Genesee County, Hassan Management Consultants, 1977.

Many students attending Mohawk Valley Community College are not from Oneida County. The counties these students come from must also pay MVCC for educating them. These other counties contribute $536,803 toward operating the college, or 40.34 percent as much as Oneida County contributes. Other income is non-educational revenue such as transcript fees, parking fines and rental of classrooms. The fund balance is a reserve that is drawn from or added to in order to balance the budget. MVCC draws revenue from many sources other than Oneida County. In fact, the Oneida County Government supplies only a very small proportion (13.41%) of the college's revenue.

COLLEGE RELATED LOCAL EXPENDITURES

In addition to spending $1,165,976 on purchases from Oneida County businesses, MVCC spends $179,990 on local health insurance and the Faculty-Student Association spends $134,424 locally. This results in total local college expenditures of $1,480,390. However, the college's existence in Oneida County creates additional local business purchases by individuals and creates jobs that would otherwise not exist. The students who come to MVCC from other counties not only cause their counties to contribute $536,803 to MVCC, but also spend $2,595,144 on personal purchases from local business and spend $557,856 annually on rent in Oneida County. The spending by these students is in addition to college spending and would not exist if MVCC did not draw these students into Oneida County.

If MVCC did not exist, many of the students who are Oneida County residents would leave and go to colleges in other counties. But because the college exists, the spending by these students remains in Oneida County and accounts for an additional $4,185,576 in purchases from local businesses.

In total, all students spend $12,962,820 in Oneida County. This includes the Oneida County spending by students who live outside the county and make purchases in the county because of their attendance at MVCC. Also, because college employees and students live in Oneida County, their visitors make purchases in Oneida County that would not be made if the college did not exist and the employees and students lived elsewhere. These purchases by visitors are $1,155,685. A summary of this information is shown in Table 2:

TABLE 2

MVCC RELATED ONEIDA COUNTY EXPENDITURES, 1977-78

College Expenditures	$ 1,480,390
Professional Employee Purchases	2,381,589
Classified Employee Purchases	1,164,361
Student Purchases	12,962,820
Visitor Purchases	1,155,685
Total MVCC related Oneida County Expenditures	$19,144,845

COLLEGE RELATED LOCAL BUSINESS VOLUME

This $19,144,845 expenditure represents the original purchases made in Oneida County by these groups. This expenditure creates income for other individuals and businesses. Many private business jobs in Oneida County are created by the $19,144,845 expenditure in local businesses. These additional jobs dependent upon college-related spending create an additional $11,486,907 of individual spending in Oneida County.

In addition to the individual spending, local businesses make purchases from other local businesses in support of their college related business. These purchases amount to an additional $3,828,969 in Oneida County. The total impact on Oneida County business volume related to MVCC is $34,460,721 as shown in the following table:

TABLE 3

MVCC RELATED ONEIDA COUNTY BUSINESS VOLUME, 1977-78

MVCC Related Local Expenditures	$19,144,845
Local Business Volume Stimulated by Individual Spending Related to MVCC	11,486,907
Local Purchases by Local Business in Support of MVCC Related Business	3,828,969
Total MVCC Related Oneida County Business Volume	$34,460,721

An expenditure of $1,330,738 by Oneida County contributes to the creation of a local business volume that is over 25 times as large as the initial expenditure. This, it must be recalled, is a short-run incidental economic benefit of MVCC to Oneida County and is just a by-product of achieving the true educational purposes of the college.

COLLEGE RELATED LOCAL POPULATION

The impact of MVCC upon Oneida County is great compared to the Oneida County contribution for a number of reasons. First, the existence of MVCC in Oneida County causes 1,209 non-county students to move into Oneida County to live while attending college and another 679 non-county students to commute to Oneida County to attend MVCC. The local business

purchases made by these students would not exist without the college, and these local business purchases are not dependent upon the college's budget. In other words, the spending by these students is in addition to the operating budget of $9,922,774.

Second, if MVCC were not in Oneida County, then many Oneida County residents would leave the county to attend college and take their spending with them. An average of 4,237 MVCC students are originally residents of Oneida County. Of these, 1,906 are full-time students and 2,331 are part-time students. Our study found that 1258 full-time students from Oneida County would leave the county to attend college if MVCC did not exist. Of these, six hundred forty-eight students would attend community colleges in other counties, and by New York State law require Oneida County to contribute to the budgets of those colleges, just as other counties currently contribute $536,803 toward Mohawk Valley Community College's operating budget for educating their students (Table 1). Oneida County would lose $8,266,440 of business purchases by all these students and also have to pay $620,077 to other counties for educating Oneida County students. Many other students would also leave Oneida County to attend private and state colleges and universities. They would take their spending with them and also cause an economic drain upon the county because their parents would spend an increasing proportion of their income outside Oneida County for tuition and financial assistance. Also the students who currently live with their parents would spend in excess of an additional 1.7 million dollars outside the county for room and board at other colleges.

Third, MVCC directly employs 380 full-time and 379 part-time persons. Of these, 358 full-time and 312 part-time employees live in Oneida County. This does not include employment by the food service at MVCC which is run by a private business, or employment by the bookstore or dormitories. A summary of the full-time and part-time persons directly associated with the college is shown below:

TABLE 4

POPULATION ASSOCIATED WITH MVCC, 1977-78

FULL-TIME

Group	Total	Currently Living In Oneida County	Currently Living In Other Counties
Employees			
Professional	220	198	22
Classified	160	160	0
Students			
Original Oneida County Residents	1906	1906	0
From other counties	1027	683	344
Total	3313	2947	366

TABLE 4 (continued)

PART-TIME

Group	Total	Currently Living In Oneida County	Other Counties
Employees			
Professional	288	221	67
Classified	91	91	0
Students			
Original Oneida County Residents	2331	2331	0
From other counties	861	526	335
Total	3571	3169	402

Table 4 only shows employees and students and does not include members of their households who also live in Oneida County because the head of the household does. An additional 687 persons are members of full-time employees' households and an additional 674 persons are members of full-time students' households.

COLLEGE-RELATED LOCAL EMPLOYMENT

The economic impact of MVCC on Oneida County is great because of the many thousands of people whose presence and spending in the county are dependent upon the existence of MVCC. We have shown only the population which is directly related to the college (employees and students) but many other people's jobs depend upon the spending by MVCC employees and students. An equivalent of 2,249 full-time jobs in Oneida County are dependent upon the existence of MVCC. This includes college employment as well as private and public jobs created by the spending of MVCC employees

and students. An elaboration of these jobs may be found in Chapter 2.

Oneida County has a resident population of 3,078 persons for every 1,000 jobs. Therefore, approximately 6,922 persons live in Oneida County because of these 2,249 jobs. In addition to these 6,922 persons who live in Oneida County because of the employment dependent upon the College, 2,589 full-time students and 674 members of students' households live in the county because MVCC is in Oneida County. This makes a total Oneida County population of 10,185 persons dependent upon the college. Approximately 3.84 percent of the Oneida County population is dependent upon the existence of the college.

The college-related full-time employment is 2.6 percent of total county employment. This is less than the 3.84 percent of the population dependent upon the college because most full-time students included in the population do not have full-time jobs and are not included in the labor force. Even though a very small percentage of students are employed full-time, the spending by all students creates jobs in local businesses.

These 2,249 local jobs produce income for the workers. The personal income earned by these workers is in excess of 17 million dollars. A summary of the impact of MVCC upon the local employment and income is shown in Table 5:

TABLE 5

MVCC'S IMPACT UPON LOCAL EMPLOYMENT AND INCOME

MVCC-related Local Employment	2,249	full-time jobs
MVCC-related Local Population	10,185	persons
MVCC-related Local Personal Income	$17,902,250	
MVCC-related Local Business Volume	$34,460,721	

MVCC CAPITAL SPENDING

We have discussed the local spending and employment that results from the MVCC 1977-78 operating budget. However, MVCC creates additional spending through its capital budget. In 1977, a classroom wing and swimming pool were added to the gymnasium. This addition cost $2,100,000 and caused the local business volume related to the college to be even greater than the $34,460,721 already cited.

The capital expenditures do not recur every year, and our conservative statement of the college's impact is based upon just the operating expenditures which are fairly stable from year-to-year. However, over the last ten years, $7,044,444, or an average of $704,444 per year, has been spent on capital expenditures, and this spending is in addition to the spending we have considered in this study.

The sources of revenue for the MVCC operating budget were summarized in Table 1. Oneida County contributes $1,330,738 toward that budget. However, Oneida County must make additional contributions toward MVCC capital expenditures. Of the $7,044,444 capital expenditures, 50 percent was provided through state aid, 5 percent was paid by the county in cash, and 45 percent was financed. During the 1977-78 fiscal year, the principal and interest on all MVCC capital financing amounted to a payment of $309,375.50.

You will recall that other counties also contribute $536,803 toward MVCC's operating budget (Table 1). This contribution is mandated by New York State law to compensate Oneida County for educating students from other counties. But these contributions only cover operating expenses, so the law specifies that the other counties will contribute toward MVCC capital expenditures as well as operating expenditures. These capital contributions from other counties amounted to $357,041.97 in 1977-78. MVCC spent $309,375.50 on capital expenditures, but Oneida County received $357,041.97, or $47,666.47 more from other counties than Oneida County contributed to the MVCC capital budget.

MVCC has low capital costs while at the same time offering quality education that draws students in from other counties. Thirty-five percent of MVCC students are from other counties, but these other counties also pay the capital costs for the 65 percent who are Oneida County residents as well as contribute to other county expenditures. The capital cost of the MVCC campus and buildings results in a surplus of $47,666.47 to the Oneida County government. MVCC brings in $357,041.97 from other counties but only spends $309,375.50 on capital expenditures while the Oneida County government spends the extra $47,666.47 on activities not related to the college. These amounts do not include the 50 percent of all capital spending which is provided through state aid at no cost to MVCC or Oneida County. The MVCC capital spending financed by other counties and state aid creates local jobs and income in addition to those created by college operating expenditures.

MVCC COSTS TO THE ONEIDA COUNTY GOVERNMENT

Mohawk Valley Community College is a cost to the Oneida County government in three ways. First is the $1,330,738 contribution Oneida County makes to the MVCC operating budget. Second, the county spends $309,375.50 on the college's capital budget. Third, the college occupies property that is not taxed. If this property were taxed it would generate county revenue of $12,567 annually. These costs are summarized in the following table:

TABLE 6

COSTS OF MVCC TO THE ONEIDA COUNTY GOVERNMENT

Contribution to MVCC operating budget	$1,330,738.00
Contribution to MVCC capital budget	309,375.50
Foregone tax revenue on MVCC property	12,567.00
TOTAL	$1,652,680.50

MVCC BENEFITS TO THE ONEIDA COUNTY GOVERNMENT

The costs to the county are easy to measure precisely, while many benefits are immeasurable. We will not attempt to measure the long-run benefits of a more educated population to Oneida County, or the increased capital formation, business expansion and larger tax base that results from these more productive individuals. However, we can measure short-run economic benefits of MVCC to the county government.

The first benefit is the $357,041.97 contribution to Oneida County by other counties for MVCC capital spending. You will recall that this contribution exceeds MVCC capital spending of $309,375.50 by $47,666.47. Therefore, the MVCC campus and buildings are no cost to Oneida County whatsoever. Not only are the

buildings no cost to the county, but they are a county asset that is growing every year. Just as homeowners make payments on their mortgages and gain greater personal equity in their homes, the Oneida County government increased their equity in college property by $320,000. This increased equity is based on the county contribution plus the resulting state aid. MVCC property is a county asset similar to the county office building or other county property and is a benefit that results from the expenditures cited in the previous section.

The county benefits from the education that Oneida County residents receive from MVCC. However, if MVCC did not exist, many MVCC students would go to colleges elsewhere. Sixty-six percent of the 1,906 full-time students who are original Oneida County residents would attend other colleges and thirty-four percent would attend other community colleges in other counties. Eighteen percent of the 2,331 part-time students who are original Oneida County residents would attend other county community colleges for their part-time studies. By New York State law, Oneida County would have to pay other counties for educating these students.

For example, if an Oneida County resident went to Onondaga Community College in Syracuse, Oneida County would have to pay Onondaga County $720 per year for that full-time student's education. If the Oneida County resident went to Herkimer County Community College the charge would be $550. The charge is different for every county because the rate is based upon how much that county pays for educating its own students. Oneida County contributes $1,330,738 to MVCC for educating the equivalent

of 2,939 full-time Oneida County resident students. Therefore, the county contribution per student is $450. Whenever a full-time student from another county attends MVCC, his county must pay MVCC $450. Whenever one of our residents attends Genesee Community College, Oneida County must pay it $1000. Other operating charge-back rates are in the Appendix.

The average rate contributed by counties to their community colleges is $786.90 per student. The $450 Oneida County contribution is the lowest of any county. Thus MVCC provides the most cost effective education of any community college in the state. It costs Oneida County much more per student to have residents attend other community colleges than it does to support MVCC.

By law Oneida County does not have to support its own community college, but it does have to support the community colleges in other counties that Oneida County residents attend. If MVCC were eliminated, Oneida County would save its $1,330,738 contribution for educating 2,939 full-time Oneida County students, but incur $856,477 of additional payments to other counties for the education of only 788 full-time students from Oneida County. Of this $856,477 payment, $620,077 would be for operations and $236,400 for other counties' capital expenditures. Educating a full-time Oneida County student at MVCC only costs the county approximately $450, while educating Oneida County students at other community colleges costs the county approximately $1,080 per student. This great difference is a result of MVCC's county cost being the lowest in the state and the fact that the capital cost to the county is zero. The county cost is small compared to the benefits to the community of increased business volume, jobs, and incomes, or the benefit to individuals who could not afford to live away from home to attend college.

The final benefit to Oneida County government we will consider is the revenue the county receives because of MVCC. Two hundred thirty-nine MVCC employees own their own homes in the the county. They directly pay county taxes of $71,801 per year. In addition, we estimate that employees and students who rent pay an additional $119,948 in county taxes indirectly through their $2,054,295 rental payments. None of this $191,749 revenue would be received by the county if MVCC did not cause these employees and students to live in the county. Besides these persons directly related to the college, many other people's jobs and presence in the county are dependent upon spending by the college, employees, and students. We will not estimate the additional county taxes they pay.

It is of interest to note that approximately one-third of the county government's revenues are from local taxes, and approximately two-thirds are inter-governmental transfers. If MVCC did not exist, Oneida County would lose not only the tax revenue cited above but also the revenue from other governments which is based on population, local income, and local taxes paid. The total county taxes of $191,749 paid by MVCC employees and students are a very small fraction of the total county revenue that results from the presence of MVCC. A summary of the benefits to Oneida County is shown in Table 7:

TABLE 7

BENEFITS OF MVCC TO THE ONEIDA COUNTY GOVERNMENT

Capital contributions from other counties	$357,041.97
County equity in capital assets	320,000.00
Contributions to other counties which are not incurred because county students attend MVCC	856,477.00
County property taxes paid by MVCC employees and students	191,749.00
TOTAL	$1,725,267.97

NET COST OF MVCC TO THE ONEIDA COUNTY GOVERNMENT

From Tables 6 and 7 it is evident that the economic benefits of MVCC to Oneida County exceed the costs. If MVCC were eliminated, the county government would not save money; instead it would have to raise taxes to keep other spending at the same level. This conclusion is based only upon changes in the county government's costs, revenues and assets. The $34,460,721 business volume related to MVCC is not even considered in reaching this conclusion; that volume creates additional county revenues beyond those considered. In addition, it must be remembered that the purpose of MVCC is to provide educational services to the local community. However, in accomplishing that purpose, MVCC benefits the county government more than it costs while generating 2,249 local jobs and $34,460,721 of local business volume as a by-product.

IF MVCC DID NOT EXIST IN ONEIDA COUNTY

We can now summarize the benefits that would be lost if MVCC did not exist. County taxes would rise to maintain other county spending. A business volume of $34,460,721 would disappear taking with it 2,249 jobs and a population of 10,185 people. Additional residents would leave the county to attend college. Other residents would never attend college because of the added expense of living away from home. The community services, training programs for business and industry, and cultural activities provided by the college would disappear.

The instructors in our Nursing program spend 3,775 hours per year supervising student nurses who are caring for hospital patients. These students spend a total of 45,275 hours each year serving the patients. This is actual service in addition

to their instruction. The care provided by MVCC nursing students would not exist without the college. The services by student interns in other programs such as Human Services and Respiratory Therapy would be lost as well.

Oneida County residents receive $2,042,966 in Veterans Administration benefits for attending MVCC. Of this, $384,724 is spent on tuition and the remaining $1,658,242 is tax free income these residents spend. Without MVCC many part-time students would not attend college because of the increased travel necessary to attend another community college, or the greater tuition of local private colleges. The Veterans Administration benefits would no longer be received nor spent in the local economy.

In addition to over two million dollars of Veterans Administration benefits, MVCC students receive $1,176,952 in state and federal grants, tuition assistance and private scholarships. This financial aid from sources outside Oneida County does not require repayment and is a source of funds that would not exist without MVCC. The foregoing summary is not all-inclusive but is representative of how the college benefits the community.

IMPLICATIONS FOR THE FUTURE

The accumulation of facts has gradually led to the inescapable conclusion that the economic benefits of MVCC outweigh the costs even without considering long-run benefits. Oneida County contributes only 13.41 percent of the MVCC operating budget, and most of the MVCC revenue is drawn from outside the county. Mohawk Valley Community College has the lowest county cost per student in New York State, but because of the

quality of its programs draws thirty-five percent of its students from other counties. It is questionable that MVCC can maintain or improve the quality of education for local and non-local students with a county contribution per student that is the lowest in the state at only 57.2 percent of the average charge-back rate in New York State. The findings of this economic impact study are impressive. The findings of future studies depend upon the actions taken in the interim.

CHAPTER 2 - DESCRIPTION OF ECONOMIC ANALYSIS

INTRODUCTION

This chapter is designed for readers who want to know the details of the study. It will explain how the results were determined and verify the findings. First, there will be an introductory discussion of the data collection. Then the American Council on Education's expenditures model[5] will be reviewed as it applies to this study. The chapter will conclude with various descriptions of the remaining data that are mentioned in the previous chapter.

DATA COLLECTION

Data was collected in three principal ways -

a. through the administration of questionnaires to the students and to the employees of the college.

b. through inspections of college and governmental records.

c. through interviews with college and governmental officials.

The main source of information for this study came from the administration of two questionnaires. The first, a pretested student questionnaire, was administered in May 1978 by members of this study group to randomly selected classes in the English and Social Science departments. These two departments offer courses which must be taken by all students.

In addition, information on the part-time evening students was obtained through the administration of the same

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[5]Caffrey and Isaacs.

questionnaire to students selected from a random sample of all the courses offered by the Division of Community Services.

Responses by the full-time students amounted to nearly 11.5 percent of the total full-time student body, while the responses by the part-time students represented 7.5 percent of the total part-time student body.

A second questionnaire was distributed to all the full-time college employees in June 1978 with their paychecks. Receptacles were provided so that the employees could immediately fill out and deposit the questionnaires and, thus, preserve their anonimity. Responses were obtained from 56 percent of the professional employees and from 40 percent of the classified employees. The response rate from the part-time professional employees was 17 percent and five percent from the part-time classified employees. It should be mentioned that the number of part-time classified employees and their payroll is very small compared to the other groups.

The expenditures by the college in the local area were obtained by taking a five percent simple random sample of the college invoices. For each selected invoice, the location of the vendor--whether local or non-local-- was noted, as was the amount. The amount in each category was totaled and a proportion was calculated. This proportion was used in relation to the total college expenditures to determine local expenditures.

COLLEGE-RELATED LOCAL BUSINESS VOLUME

The following model is the result of a study, commissioned by the American Council on Education, designed to

measure the short-run impact of educational institutions upon their immediate geographic region. It is the primary model for this study in which the institution is Mohawk Valley Community College and the geographic region is Oneida County.

College-related local business volume is the direct and indirect spending in the county by MVCC and its related groups of people. Their initial spending causes a direct impact upon businesses which in turn spend these dollars several times again. This later spending, or indirect impact, along with the initial spending creates the multiplier effect, which is the number of times the initial dollars are spent. Table 8 illustrates the model with the data from this study.

TABLE 8

COLLEGE-RELATED LOCAL BUSINESS VOLUME

STUDENTS		
Full-Time		
Local-original		
non-housing	$4,185,576	
rent	641,592	
Total	$4,827,168	
Local-newcomers		
non-housing	$ 909,756	
rent	447,480	
Total	$1,357,236	
Total full-time-local	$6,184,404	
Non-local		
non-housing	$ 256,968	
Total full-time non-local	$ 256,968	
Total Full-Time Students		$6,441,372

TABLE 8 (continued)

Part-Time (in county because of MVCC)			
Local-original			
non-housing	$4,402,296		
rent	580,356		
Total	$4,982,652		
Local-newcomers			
non-housing	$ 933,960		
rent	110,376		
Total	$1,044,336		
Total part-time-local	$6,026,988		
Non-local			
non-housing	$ 494,460		
Total part-time non-local	$ 494,460		
Total Part-Time Students		$6,521,448	
TOTAL LOCAL BUSINESS EXPENDITURES BY STUDENTS			$12,962,820
EMPLOYEES			
Classified			
Full-time-local			
non-housing	$ 965,280		
rent	72,600		
Total	$1,037,880		
Part-time-local			
non-housing	$ 87,157		
rent	39,324		
Total	$ 126,481		
Total Classified Employees		$1,164,361	
Professional			
Full-time-local			
non-housing	$1,813,843		
rent	150,696		
Total	$1,964,539		
Full-time non-local			
non-housing	$ 71,149		
Total	$ 71,149		
Part-time-local			
non-housing	$ 310,117		
rent	12,060		
Total	$ 322,177		
Part-time non-local			
non-housing	$ 23,724		
Total	$ 23,724		
Total Professional Employees		$2,381,589	
TOTAL LOCAL BUSINESS EXPENDITURES BY EMPLOYEES			$3,545,950

TABLE 8 (continued)

THE COLLEGE			
Direct Purchases from Businesses		$1,165,976	
Health Insurance		179,990	
Faculty-Student Association Spending		134,424	
TOTAL LOCAL BUSINESS EXPENDITURES BY MVCC			$1,480,390
VISITORS			
To Students			
Full-Time			
local-original	$ 421,226		
local-newcomers	174,165		
Part-Time (in county because of MVCC)			
local-original	245,106		
local-newcomers	88,365		
Total To Students		$ 928,862	
To Employees			
Classified			
full-time-local	$ 81,120		
part-time-local	21,170		
Professional			
full-time-local	108,108		
part-time-local	16,425		
Total To Employees		$ 226,823	
TOTAL LOCAL BUSINESS EXPENDITURES BY VISITORS TO STUDENTS AND EMPLOYEES			$1,155,685
MVCC - Related Local Expenditures			$19,144,845
X Multiplier			X 1.8
College-Related Local Business Volume*			$34,460,721

*also referred to as "Total MVCC-Related Oneida County Business Volume"

Needless to say, the model has numerous parts which require understanding. As an aid to understanding, the model will be broken down into these parts. Table 8 is a good reference for the amounts.

The multiplier as previously mentioned is the number of times the initial dollars are spent within Oneida County. The magnitude depends upon the mix of businesses in the local region, which in this case is Oneida County. One would associate a large multiplier with an urban region that has numerous retail outlets that attract local consumers. The multiplier is larger also, if retail outlets outside the region are a long distance from the local region. Thus Oneida County retail outlets seem to have both factors in their favor. In 1972, the county's 2,574 outlets had sales of $542,577,000, a sum greater than the $118,775,000 in sales generated by the 684 outlets in Herkimer County,[6] the market to the east. Also, the Syracuse area market is too far to the west to substantially draw consumers away from Oneida County. These facts also seem to be supported by the employee questionnaire results that are listed in Table 9. Local employees spent 86.2 percent of their total incomes in Oneida County and 13.8 percent outside the county. Non-local employees spent 23.4 percent of their incomes in Oneida County, and therefore spent less than 77 percent in their home county. When one compares local employee spending outside the county with

[6] Mohawk Valley Area, Profile of Business and Industry, Department of Commerce, State of New York (1976) p.10.

non-local employee spending in the county, it appears Oneida County has a stronger pull on consumers than the surrounding counties. Thus, a large multiplier is justified.

TABLE 9

PERCENT OF INCOME SPENT IN ONEIDA COUNTY

	No. Employees	Percentage of Income Spent in Oneida County
Classified - local		
full-time-local	160	88.6%
part-time-local	91	67.5%
Professional - local		
full-time-local	198	88.5%
part-time-local	221	90.0%
Weighted Average Percentage of Income Spent in Oneida County - All-local		86.2%
Weighted Average Percentage of Income Spent outside Oneida County - All-local		13.8%
Professional		
full-time non-local	22	31.8%
part-time non-local	67	20.7%
Weighted Average Percentage of Income Spent in Oneida County - All-non-local		23.4%

A multiplier of 1.8 was selected because it is conservative when compared to multipliers used in similar studies of similar regions, such as 2.38 for Syracuse[7] and 1.90 for Binghamton.[8] The Oneida County multiplier means that of $1.80 spent in Oneida County, the first dollar ($1.00) is spent by students, or employees, or the college, or visitors at local businesses. These businesses take the one dollar and pay some of it to local employees and businesses. This one dollar is estimated to create an additional $.60 in

[7]Hassan, The College, p.17.

[8]Romano and Herbert, p.7.

local consumer spending and an additional $.20 in local business spending.[9] Thus the one dollar plus the sixty cents and the twenty cents add up to $1.80, the multiplier. If the employees' responses are typical of Oneida County consumers, it seems 1.8 is a very conservative multiplier.

College-related local expenditures is the total spending in Oneida County by the college and the people who are associated with MVCC. Table 10 represents the total.

TABLE 10

COLLEGE-RELATED LOCAL EXPENDITURES*

Local Business Expenditures	amount	percentage
MVCC Students	$12,962,820	67.7%
MVCC Employees	3,545,950	18.5
MVCC	1,480,390	7.7
Visitors	1,155,685	6.1
College-Related Local Expenditures	$19,144,845	100.0%

*also referred to as "MVCC - Related Local Expenditures"

A further explanation of each part of the model is necessary in order to understand its results. The explanation begins with the students, the part that makes the largest impact upon the total amount.

Local business expenditures by MVCC students is the total spent in one school year by the students in Oneida County. It makes up more than two-thirds of the total college-related local expenditures and the amounts are listed in Table 11.

[9]Caffrey and Isaacs, p.45.

TABLE 11

LOCAL BUSINESS EXPENDITURES
BY MVCC STUDENTS

Full-Time			
Local-original			
non-housing	$4,185,576		
rent	641,592		
Total	$4,827,168		
Local-newcomers			
non-housing	$ 909,756		
rent	447,480		
Total	$1,357,236		
Total full-time-local	$6,184,404		
Non-local			
non-housing	$ 256,968		
Total full-time non-local	$ 256,968		
Total Full-Time Students		$6,441,372	
Part-Time (in county because of MVCC)			
Local-original			
non-housing	$4,402,296		
rent	580,356		
Total	$4,982,652		
Local-newcomers			
non-housing	$ 933,960		
rent	110,376		
Total	$1,044,336		
Total part-time-local	$6,026,088		
Non-local			
non-housing	$ 494,460		
Total part-time non-local	$ 494,460		
Total Part-Time Students		$6,521,448	
TOTAL LOCAL BUSINESS EXPENDITURES BY MVCC STUDENTS			$12,962,820

In response to a questionnaire the students estimated their monthly non-housing and rental expenditures. Table 12 lists the formulas for deriving total non-housing and rental expenditures.

TABLE 12

EXPENDITURE FORMULAS

NON-HOUSING SPENDING FORMULA

Estimated Monthly Non-Housing Spending per Student
X Number of Months
= Yearly Spending per Student
X Number of Students in Classification
= Total Yearly Non-Housing Spending per Classification

RENTAL SPENDING FORMULA

Estimated Monthly Rent per Student
X Number of Months
= Yearly Rent per Student
X Number of Renters in Classification
= Total Yearly Rent per Classification

The students were classified according to the following categories: full-time versus part-time, local versus non-local, and original resident versus newcomer. Full-time students are enrolled in 12 or more credit hours while part-time students take less than 12 credit hours. Local students currently reside in Oneida County while non-local students do not currently reside in Oneida County. And original residents are local students who lived in Oneida County prior to attending MVCC while newcomers are local students who did not live in the county just prior to attending the college.

This last group came to Oneida County because of the college and constitutes a large portion of the 35 percent of MVCC students who applied to the college from other counties. The remaining portion of this 35 percent consists of non-local students who commute daily to classes.

There are various reasons for the previous student classifications. First, it is unrealistic to credit the college with local spending by all local part-time students. Most of them would spend locally even if the college did not exist because there are other reasons to remain in Oneida County. Second, it is important to credit MVCC with all spending by non-local and local newcomer students because the college attracted the students to the county. But this is not true of all full-time local students, because, as with many local part-time students, they would still live locally if the college did not exist. Table 13 lists the amounts according to classification.

TABLE 13

LOCAL BUSINESS EXPENDITURES BY MVCC STUDENTS
(COMPUTATIONS)

	Full-Time Students		
	local-original	local-newcomer	
Non-housing			
Monthly Spending per Student*	$183	$148	
X No. of Months	X 12	X 9	
Yearly Spending per Student	$2196	$1332	
X Students in Class	X1906	X 683	
Total Yearly Spending	$4,185,576 +	$909,756 =	$5,095,332
Rent			
Monthly Rent per Student*	$133	$113	
X No. of Months	X 12	X 9	
Yearly Rent per Student	$1596	$1017	
X Students in Class	X 402	X 440	
Total Yearly Rent	$641,592 +	$447,480 =	$1,089,072
TOTAL SPENDING BY FULL-TIME LOCAL STUDENTS			$6,184,404

	Part-Time Students (in county because of MVCC)		
	local-original	local-newcomer	
Non-housing			
Monthly Spending per Student*	$458	$362	
X No. of Months	X 12	X 12	
Yearly Spending per Student	$5496	$4344	
X Students in Class	X 801	X 215	
Total Yearly Spending	$4,402,296 +	$933,960 =	$5,336,256
Rent			
Monthly Rent per Student*	$147	$126	
X No. of Months	X 12	X 12	
Yearly Rent per Student	$1764	$1512	
X Students in Class	X 329	X 73	
Total Yearly Rent	$580,356 +	$110,376 =	$ 690,732
TOTAL SPENDING BY PART-TIME LOCAL STUDENTS			$6,026,988

TABLE 13 (continued)

	Non-Local Students		
	full-time	part-time	
	Non-housing		
Monthly Spending per Student*	$83	$123	
X No. of Months	X 9	X 12	
Yearly Spending per Student	$747	$1476	
X Students in Class	X344	X335	
Total Yearly Spending	$256,968	+ $494,460 =	$ 751,428
TOTAL SPENDING BY ALL NON-LOCAL STUDENTS			$ 751,428
LOCAL BUSINESS EXPENDITURES BY MVCC STUDENTS			$12,962,820

*Source: Student questionnaire

An explanation, with the help of the following tables, is necessary in order to understand how some of these figures were derived.

First, the local full-time students will be considered. The average 1977-78 MVCC full-time enrollment was 2,933 students per quarter. This amount was derived by averaging 3,215, 2,906, and 2,679 students from the fall, winter, and spring quarters respectively for the 1977-78 academic year. Because MVCC admitted 65 percent of its full-time students from Oneida County, of the average enrollment of 2,933 students, 1,906 students are estimated to be from Oneida County and are classified as local original students. The remaining 1,027 students come from other counties.

TABLE 14

MVCC FULL-TIME STUDENT ENROLLMENT*

Fall 77		Winter 77-78		Spring 78		Average 77-78
(3215	+	2906	+	2679)	÷ 3 =	2933 students

Average 77-78 Enrollment	X	Percentage In/Out of Oneida County		
2933	X	65%	=	1906 Original Oneida County Residents
2933	X	35%	=	1027 Students from Other Counties

*Source: MVCC Office Of Institutional Research

By definition, the 1,906 original county residents are counted as still living in Oneida County. The students from other counties responded to a questionnaire and 107 out of 161 respondents live in Oneida County. Thus it is estimated that 683 of the 1,027 students from other counties reside in Oneida County and are classified as local newcomers. The 1,906 and 683 students make up the full-time local students.

The number of renters was obtained from a survey of both student groups. Of 147 surveyed, 31 full-time, local, original resident students rent. Thus it is estimated 402 students in this group rent. In the full-time, local, newcomers group, 69 of the 107 students surveyed said they rent. Therefore, it is estimated 440 students in this group rent.

TABLE 15

MVCC LOCAL FULL-TIME STUDENT RENTERS

STUDENTS	Currently Reside- In Oneida County	X	Fraction of Respondents Who Rent*	=	Estimated Renters
Original Oneida County Residents	1,906	X	31/147	=	402
From Other Counties	683	X	69/107	=	440
Totals	2,589				842

*Source: Student questionnaire

The "currently reside in Oneida County" and the "estimated renters" numbers are used for the number of students in the non-housing and rental expenditures amounts respectively.

Also, full-time, local, original resident students' expenditures (both non-housing and rent) have a year round impact on Oneida County. Thus their monthly expenditures are multiplied by 12 months. But many full-time local newcomers probably will leave the county during the three summer months. Thus their monthly expenditures are multiplied by 9 months.

Second, the local part-time students will be considered. The average 1977-78 MVCC part-time enrollment was 3,192 students per quarter. This amount is the average of 3,847, 2,675, 3,612, and 2,633 students from the fall 1977-78 through the summer 1978 quarters. The records show 73 percent of MVCC's part-time students are from Oneida County and are classified as local original students. Of the 3,192 part-time students, 2,331 students are estimated to be originally from the county. The remaining 861 students come from other counties.

TABLE 16

MVCC PART-TIME STUDENT ENROLLMENT*

Fall 77		Winter 77-78		Spring 78		Summer 78		Average 77-78
(3847	+	2675	+	3612	+	2633)	÷ 4 =	3192

Average 77-78 Enrollment		Percentage In/Out of Oneida County			
3192	X	73%	=	2331	Original Oneida County Residents
3192	X	27%	=	862	Students from Other Counties

*Source: MVCC Registrar's Office

By definition, the 2,331 original Oneida County residents are assumed to still live in Oneida County. Of the 72 students from other counties who responded to a questionnaire, 44 live in Oneida County. From this it is estimated 526 of the 862 part-time students from other counties now reside in the county and are classified as local newcomers.

The number of renters was obtained from the same survey of both groups. Of 195 surveyed, 81 part-time, original resident students rent. Thus it is estimated 968 students in this group rent. In the part-time, local, newcomers group 15 of 44 responding students rent. It is estimated 179 students in the entire group rent.

TABLE 17

MVCC LOCAL PART-TIME STUDENT RENTERS

STUDENTS	Currently Reside- In Oneida County	X	Fraction of Respondents Who Rent*	=	Estimated Renters
Original Oneida County Residents	2330	X	81/195	=	968
From Other Counties	526	X	15/44	=	179
TOTALS	2856				1147

Source: Student questionnaire

The "currently reside in Oneida County" and the "estimated renters" numbers of local part-timers are not used for the number of students in the non-housing and rented expenditures amounts in Table 13 because most part-time students live in Oneida County for reasons other than attending the college. But because part-time students have some impact upon spending, it is assumed the college should be credited for the spending by part-time students who would leave the county to attend another college or work if MVCC did not exist. Of the 195 original Oneida County residents surveyed, 67 would leave the county. This is estimated to cause the loss of 801 students in this category, of which 329 are renters. And in the survey of 44 newcomers, 18 would leave the county. This leads to an estimate of 215 students, including 73 who rent in Oneida County being lost to the county. These figures are used to account for part-time students' non-housing and rental expenditures in Table 13.

TABLE 18

MVCC PART-TIME STUDENTS LOST

STUDENTS	Currently Reside In Oneida County	Rent-In Oneida Co.		Fraction Lost*	=	Total Lost
Original Oneida County Residents	2331		X	67/195	=	801
		968	X	67/195	=	329
From Other Counties	526		X	18/44	=	215
		179	X	18/44	=	73

*Source: Student questionnaire

In the case of all local part-time students, it is assumed they reside in the county all year long because of reasons other than the college. As a result, the impact of their spending is felt all year long. Thus their monthly non-housing and rental expenditures are multiplied by 12 months. It is assumed part-time newcomers stay all year for employment and educational reasons. A careful observation shows part-time newcomers spend $362 per month while full-time newcomers spend only $148 per month (41 percent of full-timers' spending). This implies there is employment which will hold the part-time newcomers in Oneida County.

Third, all non-local students will be considered. As previously mentioned, 1,027 full-time students come from other counties, of whom 683 currently live in the county. Thus 344 full-time students commute from other counties. Also, 861 part-time students come from other counties, of whom 526 currently reside in the county. As a result 335 part-time students commute from other counties. These groups are classified as non-local and they do not rent in Oneida County.

TABLE 19
MVCC NON-LOCAL STUDENTS

STUDENTS - FROM OTHER COUNTIES

	Total	Currently Live-In Oneida County	Total Non-Local
Full-Time	1027	683	344
Part-Time	861	526	335
Total		1209	679

As mentioned at the outset of this discussion, student spending makes the largest impact upon Oneida County of all college related expenditures. Employee spending makes the second largest impact.

Local business expenditures by MVCC employees are the one year spending in Oneida County by the college's employees. Table 20 lists the amounts.

TABLE 20

LOCAL BUSINESS EXPENDITURES BY MVCC EMPLOYEES

Classified Employees			
Full-time-local			
non-housing	$ 965,280		
rent	72,600		
Total	$1,037,880		
Part-time-local			
non-housing	$ 87,157		
rent	39,324		
Total	$ 126,481		
Total Classified Employees		$1,164,361	
Professional Employees			
Full-time-local			
non-housing	$1,813,843		
rent	150,696		
Total	$1,964,539		
Full-time non-local			
non-housing	$ 71,149		
Total	$ 71,149		
Part-time-local			
non-housing	$ 310,117		
rent	12,060		
Total	$ 322,177		
Part-time non-local			
non-housing	$ 23,724		
Total	$ 23,724		
Total Professional Employees		$2,381,589	
TOTAL LOCAL BUSINESS EXPENDITURES BY EMPLOYEES			$3,545,950

In a questionnaire, employees estimated the percentage of their total family incomes that is spent in Oneida County. Because the MVCC employees spend part of their incomes outside Oneida County, it is inappropriate to count the total payroll as the total local business expenditures by employees. The percentage is based upon total family incomes because many employees have several sources of family income (i.e., savings accounts pay interest income, stocks pay dividends, spouse is employed). It is assumed that employees having multiple sources of income do not associate their expenditures with a particular source of income. For instance, when paying rent, one would be indifferent if its source is the college or a part-time job. So by asking for expenditures as a percentage of total family income, it is assumed respondents could easily answer the questionnaire.

Specifically, employee total family incomes and local expenditures were estimated from the college payroll. The employees, in response to a questionnaire, first estimated the percentage of their total family incomes that is derived from the college. From this percentage and the college payrolls, total family incomes were estimated by setting them in the formula in Table 21.

TABLE 21

TOTAL FAMILY INCOMES OF MVCC EMPLOYEES
(FORMULA)

$$\text{Total Family Income} = \frac{\text{MVCC Payroll}}{\text{Percent of Total Family Income Derived from MVCC}}$$

Table 22 lists the total family incomes for the various employee groups.

TABLE 22

ACTUAL FAMILY INCOMES OF MVCC EMPLOYEES

Classified-full-time	$1,442,870 =	$940,751 / 65.20%
Classified-part-time	$ 174,314	
Professional-full-time	$3,053,608 =	$2,456,322 / 80.44%
Professional-part-time	$ 629,494	

Because payroll data are important for determining the total family incomes, employees were classified in two categories; classified or professional, and full-time or part-time. Classified employees have civil service status and consist of clerical, maintenance, and security employees. Professional employees do not have this status and are the administrators, counselors, faculty, and technical assistants. Both groups have employees who are classified as either full-time employees, those who work 35 hours or more per week, or part-time employees, those who work less than 35 hours per week. These employees were so classified because they are on payrolls that are arranged in this manner. As additional information, in Table 25, as is with the students, local employees reside in Oneida County and non-local employees do not reside in the county.

For conservative purposes, MVCC's payroll for part-time employees is counted as their total family income. It is assumed part-time employees stay in the county for reasons other than their employment at MVCC. As an

example, the income paid to a professional lawyer for part-time teaching of a course in business law is inadequate to keep the lawyer in the county. If part-time employees' actual total family incomes had been used, college related non-housing business expenditures by employees would have been much higher.

Next, in order to arrive at total non-housing spending in the county, the employees estimated the percentage of their total family income spent in Oneida County. The formula in Table 23 was used to derive the non-housing spending in Oneida County.

TABLE 23

FAMILY NON-HOUSING EXPENDITURES
(FORMULA)

	Total Family Income (all groups)
X	Percentage (fraction) Employees in Group
=	Total Family Income (Particular Group)
	Percentage of Family Income
X	Spent on Non-Housing in Oneida County
=	Total Non-Housing Expenditures

The formula for arriving at total rent is listed in Table 24. It is similar to one used for student rent.

TABLE 24
FAMILY RENTAL EXPENDITURES
(FORMULA)

	Monthly Rent per Employee
X	Number of Months
=	Yearly Rent per Employee
X	Number of Renters
=	Total Yearly Rent

Table 25 lists the expenditures in Oneida County by all college employees.

TABLE 25

LOCAL BUSINESS EXPENDITURES BY MVCC EMPLOYEES (COMPUTATIONS)

FULL-TIME EMPLOYEES

	Classified-local	Classified-non-local
	Non-Housing	
Total Family Income	$1,442,870	
Fraction	160	
X in Group	X 160	
Total Family Income (particular group)	$1,442,870	
% Family Income		
X Spent in Oneida County	X .669	
Total Non-Housing Expenditures	$ 965,280 + $ 0* =	$ 965,280
	Rent	
Monthly Rent per Employee	$121	
X Number of Months	X 12	
Yearly Rent per Employee	$1,452	
X Number of Renters	X 50	
Total Yearly Rent	$72,600 + $ 0* =	$ 72,600

TOTAL SPENDING BY FULL-TIME CLASSIFIED EMPLOYEES = $1,037,880

PART-TIME EMPLOYEES

	Classified-local	Classified-non-local
	Non-Housing	
Total Family Income	$ 174,314	
Fraction	91	
X in Group	X 91	
Total Family Income (particular group)	$ 174,314	
% Family Income		
X Spent in Oneida County	X .500	
Total Non-Housing Expenditures	$ 87,157 + $ 0* =	$ 87,157
	Rent	
Monthly Rent per Employee	$113	
X Number of Months	X 12	
Yearly Rent per Employee	$1,356	
X Number of Renters	X 29	
Total Yearly Rent	$ 39,324 + $ 0* =	$ 39,324

TOTAL SPENDING BY PART-TIME CLASSIFIED EMPLOYEES = $ 126,481

*No classified non-local employees work for the college.

TABLE 25 (continued)

	FULL-TIME EMPLOYEES		
	Professional-local	Professional non-local	
Non-Housing			
Total Family Income	$3,053,608	$3,053,608	
Fraction X in Group	198/220	22/220	
Total Family Income (particular group)	$2,748,247	$ 305,361	
% Family Income X Spent in Oneida County	.660	.233	
Total Non-Housing Expenditures	$1,813,843 +	$ 71,149 =	$1,884,992
Rent			
Monthly Rent per Employee	$182		
X Number of Months	12		
Yearly Rent per Employee	$2,184		
X Number of Renters	69		
Total Yearly Rent	$ 150,696 + 0**	=	$ 150,696
TOTAL SPENDING BY FULL-TIME PROFESSIONAL EMPLOYEES			$2,035.688

	PART-TIME EMPLOYEES		
	Professional-local	Professional non-local	
Non-Housing			
Total Family Income	$ 629,494	$ 629,494	
Fraction X in Group	221/288	67/288	
Total Family Income (particular group)	$ 483,049	$ 146,445	
% Family Income X Spent in Oneida County	.642	.162	
Total Non-Housing Expenditures	$ 310,117 +	$ 23,724 =	$ 333,841
Rent			
Monthly Rent per Employee	$201		
X Number of Months	12		
Yearly Rent per Employee	$2,412		
X Number of Renters	5		
Total Yearly Rent	$ 12,060 + 0**	=	$ 12,060
TOTAL SPENDING BY PART-TIME PROFESSIONAL EMPLOYEES		=	$ 345,901

**Non-local employees do not rent in Oneida County.

Some remarks about the tables' data are necessary.

First, in non-housing expenditures, the term "fraction in classification" refers to the fraction of local or non-local employees as compared to the total in each classification. For instance out of 160 full-time classified employees 160 were classified local, or reside in Oneida County. Because no classified employees reside in other counties, data for classified non-local employees is unnecessary. But out of 220 full-time professional employees, 198 are Oneida County residents. Thus the fraction 198/220 of the total family income for all full-time professional employees is attributed to the local group, who reside in Oneida County. For further verification, compare computations with following population table.

TABLE 26

EMPLOYEE POPULATION ASSOCIATED WITH MVCC, 1977-78*

Group	Total	Reside in Oneida County	Other Counties
(Full-Time)			
Classified	160	160	0
Professional	220	198	22
(Part-Time)			
Classified	91	91	0
Professional	288	221	67

*Source; Mohawk Valley Community College Business Office.

Second, the rental expenditures were derived by the same questionnaire method as the student rental expenditures. Of the 61 classified employees surveyed, 19 rent in the county. Thus, it is estimated that 50 of the 160 full-time classified employees rent in Oneida County. The remaining renters can be estimated with the aid of the following table.

TABLE 27

MVCC LOCAL EMPLOYEE RENTERS

Employee	Total	Currently Reside in Oneida Cty.	X	Fraction of Respondents Who Rent	=	Estimated Renters
Classified Full-time	160	160	X	19/61	=	50
Classified Part-time	91	91	X	2/5	=	36
Professional Full-time	220	198	X	37/106	=	69
Professional Part-time	288	221	X	7/35	=	44

The same problem exists with part-time faculty as with part-time students. They remain in the county for reasons other than being employed by the college. Of the part-time classified and professional employees responding to the questionnaire four from each group said they would not live in the county if the college did not exist. Thus it is estimated 29 classified and five professional employee renters would leave the county and these amounts are credited to the existence of the college. Table 28 will assist interested readers in computing these totals.

TABLE 28

MVCC LOCAL PART-TIME EMPLOYEES LOST

Employees	Currently Reside- In Oneida County	Rent-In Oneida Cty.	X	Fraction Lost	=	Total Lost
Classified	91		X	4/5	=	73
		36	X	4/5	=	29
Professional	221		x	4/35	=	25
		44	X	4/35	=	5

Third and last, all employees' expenditures have a twelve month impact upon the county because it is assumed they are in the county for the entire year.

After this long investigation, it should be remembered that employee local business expenditures are $3,545,950, or over 18 percent of the total college related local expenditures. The other categories, expenditures by the college and by the visitors will be discussed next. Both require only a brief discussion.

TABLE 29

LOCAL BUSINESS EXPENDITURES
BY MVCC

Direct Purchases from Oneida County Businesses	$1,165,976
Health Insurance	179,990
Faculty-Student Association Spending	134,424
Total Local Business Expenditures By MVCC	$1,480,390

Local business expenditures by MVCC are the total expenditures made in Oneida County by the college, less expenditures for payrolls and capital items. Sampling techniques were used to estimate the amount. Specifically, five percent of all invoices paid between June 1, 1977 and May 31, 1978 were sampled.

Of the total dollar amount paid in the sample invoices, 52.2 percent of the amount was paid to vendors with Oneida County addresses. This percentage represents the percentage of total college purchases paid to Oneida County vendors. Thus, the 52.2 percent times the purchases by the college gives the $1,165,976 in local business purchases by the college. In addition, the $179,990 spent on local insurance and $134,424 spent locally by the Faculty-Student Association makes a $1,480,390 total expenditure that is attributed to the college.

Local business expenditures by visitors to the MVCC students and employees are the estimated expenditures by personal visitors to the students and employees. Table 30 lists the results.

TABLE 30

TOTAL LOCAL EXPENDITURES
BY VISITORS
TO STUDENTS AND EMPLOYEES

To Students	
Full-time	
Local-original	$421,226
Local-newcomers	174,165
Part-time(in county because of MVCC)	
Local-original	245,106
Local-newcomers	88,365
Total to Students	$928,862

To Employees		
Classified		
full-time-local	$ 81,120	
part-time-local	21,170	
Professional		
full-time-local	108,108	
part-time-local	16,425	
Total to Employees		$226,823
Total Local Business Expenditures By Visitors To Students And Employees		$1,155,685

The students and employees estimated the annual spending in the county by visitors to their homes. The totals were derived by multiplying the number of persons in each category by the average annual spending. Table 31 shows the computations.

TABLE 31

TOTAL LOCAL EXPENDITURES

BY VISITORS

TO STUDENTS AND EMPLOYEES
(COMPUTATIONS)

To Students

	Full-Time Students			
	Local-original		Local-newcomers	
Annual Spending	$ 221		$ 255	
X Number of Students	X 1,906		X 683	
Total Spending by Visitors	$421,226	+	$174,165	= $595,391

	Part-Time Students (in county because of MVCC)			
	Local-original		Local-newcomers	
Annual Spending	$ 306		$ 411	
X Number of Students	X 801		X 215	
Total Spending by Visitors	$245,106	+	$ 88,365	= $333,471

	Local Classified Employees				
	Full-time		Part-time		
Annual Spending	$ 507		$ 290		
X Number of Employees	X 160		X 73		
Total Spending by Visitors	$ 81,120	+	$ 21,170	=	$ 102,290

	Local Professional Employees				
	Full-time		Part-time		
Annual Spending	$ 546		$ 657		
X Number of Employees	X 198		X 25		
Total Spending by Visitors	$108,108	+	$ 16,425	=	$ 124,533

Total Local Business Expenditures By Visitors To Students And Employees	$1,155,685

The number of part-time students and employees is based upon the number who said they would leave the county if MVCC did not exist. Otherwise the $1,155,685 is computed as were the other categories.

When the four categories are added together, the college is credited with causing $19,144,845 worth of expenditures to local businesses. When the multiplier effect is accounted for, these expenditures total $34,460,721.

ADDITIONAL DATA

This chapter will conclude with a derivation of data and brief discussions on

- -the jobs created by the college
- -the lost income if students leave Oneida County to attend colleges in other counties
- -the lost property taxes from college owned property
- -the benefits from financial aid to Oneida County students
- -the benefits of free services provided by MVCC students
- -the benefits resulting from capital construction

JOBS IN ONEIDA COUNTY

One important benefit of the college's presence is that the college creates jobs in Oneida County. The college employs 380 full-time employees and 379 part-time employees. But 2,249 jobs in all sectors of the local economy can be attributed to the college.

The 2,249 jobs are estimated by multiplying the number of jobs created locally by one dollar of spending times the total expenditures directly associated with the college, and then adding this amount to the number of jobs at the college. The number of jobs created by one dollar of spending is really the ratio of all jobs(numerator)to all spending(denominator). The American Council on Education study says it should be between .00007 and .00009 jobs per one dollar of spending.[10] Because it is in the middle of the range, this study assumes .00008 is the appropriate ratio. Therefore, it would stand to reason that one dollar of spending creates .00008 jobs. If the spending doubles to two dollars, then the jobs would double to .00016 jobs. In this case the ratio is multiplied by the college associated expenditures of $22,545,659 to arrive at 1,804 of the 2,249 jobs. The difference between the two amounts, 445, is the number of jobs at the college. Table 32 illustrates the computation.

TABLE 32

TOTAL JOBS DUE TO THE COLLEGE

(No. of Jobs Created (by One Dollar	Spending Associated) with MVCC)		Jobs at MVCC		Jobs Due to MVCC
.00008	X $22,545,659	+	445	=	2,249

[10] Caffrey and Isaacs, p. 45.

Something should be mentioned about the "spending associated with MVCC" and the "jobs at MVCC". The spending amount represents the spending directly associated with the college plus the government spending for municipal services required to support the college's students and employees. This second amount is derived from the percent of total county school budgets and municipal services budgets that support the students and employees. The percent of the school budgets is derived by the estimated number of children of students and employees taken as a percentage of the total school population. The municipal budgets portion is the number of students and employees and members of their households taken as a percentage of the total county population. Both of these percentages are multiplied by their respective budgets in order to obtain the spending associated with MVCC. Tables 33,34, and 35 illustrate the computations.

TABLE 33

PUBLIC SCHOOL BUDGETS

ASSOCIATED WITH MVCC

STUDENTS AND EMPLOYEES

Number of Children in Public Schools

Students	No. in Category	X	Av. No. in Pub.Schools*	=	Total in Pub.Schools
Full-time-original	1906	X	.157	=	299
Full-time-newcomers	1027	X	.029	=	29
Employees					
Full-time-classified	160	X	.430	=	69
Part-time-classified	73*	X	0	=	0
Full-time-professional	198	X	.670	=	132
Part-time-professional	25*	X	1.220	=	30
Total Children In Public Schools					559

ONEIDA COUNTY SCHOOL BUDGETS

ATTRIBUTED TO CHILDREN

OF MVCC STUDENTS AND EMPLOYEES

No. of MVCC Children in Public Schools / No. of Children in Public Schools	X	Public School Budgets	=	Budgets For Children for MVCC Students and Employees
559 / 50,833**	X	$105,684,975	=	$1,162,196

*Source: MVCC student and employee questionnaires

**Source: Oneida County Board of Cooperative Education Services

TABLE 34

MUNICIPAL BUDGETS

ASSOCIATED WITH MVCC

STUDENTS AND EMPLOYEES

Total Persons In Households
Of People Associated With MVCC

Students	No. in Category	X	Av. No. in Household*	=	Total in Households
Full-time-original	1906	X	1.320	=	2516
Full-time-newcomers	1027	X	1.093	=	1123
Employees					
Full-time-classified	160	X	2.980	=	477
Part-time-classified	73*	X	2.800	=	204
Full-time-professional	198	X	2.870	=	568
Part-time-professional	25*	X	3.920	=	96
Total					4,984

ONEIDA COUNTY MUNICIPAL BUDGETS

ATTRIBUTED TO

PEOPLE ASSOCIATED WITH MVCC

No. of People Associated with MVCC / No. of People in Oneida County	X	County Municipal Budgets	=	Budgets Attributed to People Associated with MVCC
4,984 / 266,000**	X	$119,476,780	=	$2,238,618

*Source: MVCC student and employee questionnaires

**Source: Oneida County Office of Taxation

TABLE 35

TOTAL SPENDING ASSOCIATED WITH MVCC

School Budgets for Children of MVCC Students and Employees	$ 1,162,196
Municipal Budgets Attributed to People Associated with MVCC	$ 2,238,618
College-Related Local Expenditures (Table 8)	$19,144,845
Total Spending Associated With MVCC	$22,545,659

The "jobs at MVCC" in Table 32 is the total full-time employees plus the part-time employees converted to the equivalent of a full-time employee. The conversion is made by dividing the total part-time gross payrolls by the average gross pay per full-time employee. Table 36 illustrates this calculation.

TABLE 36

JOBS AT MVCC

Full-time Classified		=	160
Full-time Professional		=	220
Part-time Classified			
Gross Part-time Payroll - Class. / Average Pay per Class. Employee (f.t.)	$185,676 / $ 8,336	=	22
Part-time Professional			
Gross Part-time Payroll - Prof. / Average Pay per Prof. Employee (f.t.)	$701,512 / $ 16,178	=	43
Total Jobs at MVCC			445

In conclusion, the college is credited with 2,249 jobs in Oneida County.

COST OF COUNTY RESIDENTS LEAVING THE COUNTY FOR COLLEGE

The expenditures model shows that the county benefits from the presence of the college. These benefits would be lost if the college did not exist in Oneida County. But more would be lost. The county government would have to pay an additional $856,477 in charge-backs to other counties and the business community would lose an additional $1,535,032 in business volume caused by the drain on family income to pay for higher costs of attending college outside the county. Both of these amounts will be derived here.

The charge-back is the amount that each local county must pay to community colleges outside the local county(operating charge-back)or to other county governments(capital charge-back) to cover the cost of educating the local residents who attend these community colleges. The amount is computed by multiplying the average charge-back times the number of local original students who would leave the county to attend community colleges outside the county. Table 37 shows this computation.

TABLE 37
CHARGE-BACKS TO OTHER COMMUNITY COLLEGES
IF MVCC DID NOT EXIST

Student-Type Charge-Back	Average	X	No.Lost Students	= Total
Full-time				
Operating charge-back	$786.90	X	648	= $509,911
Capital charge-back	$300.00	X	648	= 194,400
Part-time				
Operating charge-back	$786.90	X	140	= 110,166
Capital Charge-back	$300.00	X	140	= 42,000
Total-All charge-backs				$856,477

The average operating charge-back per full-time equivalent student(F.T.E.)is the average charged by the thirty community colleges in New York. See Appendix for a listing of the colleges and the amounts. The capital charge-back is $300 per F.T.E. per year for all community colleges. The number of full-time students lost to other community colleges is based upon the fraction of respondents to the questionnaire who indicated they would leave the county for another community college. The lost part-time students are computed the same way as the full-time students, except they are multiplied by the average F.T.E. per part-time student, which is .33536626. While part-time students would leave the county, it is assumed they would make up the same fraction of an F.T.E. at the other community colleges as they do at MVCC. Table 38 clarifies the computations of these lost students.

TABLE 38
NUMBER OF STUDENTS LOST
TO OTHER COMMUNITY COLLEGES

	Number of Students		Fraction Who would attend another C.C.*		Percent F.T.E.**	=	Total Lost Students
Full-time	1,906	X	$\frac{50}{147}$	X	1.0	=	648
Part-time	2,336	X	$\frac{35}{195}$	X	.33536626	=	140
All original students							788

*Source: MVCC student questionnaire
**Source: MVCC Registrar's Office

The other cost is to the business community in the form of a drain on family income of Oneida County residents when the students leave the county to attend any college. This is due to the increased spending for tuition, room, and board that the student would take out of the county. This study assumes all students who leave the county would attend public-supported colleges and thus there would be no increase in tuition. But spending on room and board would increase by $1,184 per student. This figure is based upon the difference between the estimated budget of an MVCC commuter student who does not rent and an MVCC student who lives in off-campus housing.[11]

The amount is calculated by multiplying the number of non-renters who would attend college outside the county times the additional cost of living away at college. This amount is then multiplied by the percentage of income spent in the county which is based upon a weighted average of spending by all MVCC employees. The non-renters were selected because it is assumed they have family members (e.g., parents) who would remain in Oneida County, but would have to decrease their local spending in order to support a student away from home. The renters, on the other hand, are assumed to transfer their entire spending out of county by moving and renting outside the county. This loss is included in the $19,144,845 of local business expenditures that would be lost if the college did not exist. Table 39 shows the computations.

---

[11]Source: MVCC Counseling Center

TABLE 39

LOST LOCAL FAMILY SPENDING TO SUPPORT
ADDITIONAL OUT-OF-COUNTY EXPENDITURES

	Full-time	Part-time
No. students	1,906	2,330
Less: No. renters	- 402	- 968
No. non-renters	1,504	1,362
Fraction who would leave to attend college	x $\frac{97}{147}$	x $\frac{67}{195}$
Students who would leave to attend college	992	468
Increased cost per student to leave county for college	x $1,184	x $1,184
Total increased cost to leave county to attend college	$1,174,528	$ 554,112

Total Increased Cost	$1,728,640
Percent of Income Spent in Oneida County	X 86.2%*
Additional Lost Spending	$1,490,087

*See Table 9.

Thus, conservatively it is estimated the county would lose an additional $1,490,087 in business expenditures if the college did not exist. This is a conservative estimate because it assumes no students would pay the high tuition to attend a private college outside the county. This does not seem like a realistic assumption.

PROPERTY TAXES LOST

While the county benefits from the college, it costs the various county governing bodies(county, municipal, and school) $12,566 in lost property taxes. These taxes would have been collected if the college did not exist in the county and the present campus sites were owned by tax paying parties, such as private businesses or households. The college currently occupies eighty-one acres in Utica and fifteen acres in Rome. In interviews with the tax assessors of each city, it was estimated the county loses $8,676 and $3,890 in tax revenues from each campus respectively. This loss assumes the land is undeveloped and taxed at the current rates of $160.67 per $1000 in Utica and $81.05 per $1000 in Rome. The use of undeveloped land is justified because if the college did not exist in the county, ninety-six acres more of undeveloped land would exist. For instance, maybe the present sites would be developed, but it would mean that ninety-six acres of currently developed land would be undeveloped. Thus the real cost to the county is ninety-six acres of undeveloped land. To help understand this tax loss, Table 40 illustrates the computations.

TABLE 40

LOST PROPERTY TAXES
BECAUSE OF MVCC

Campus	No.Acres*	x	Assessed Value per Acre**	x	Tax Rate per $1.00	=	Total Taxes
Rome	15	x	$3,200.00	x	.08105	=	$3,890.40
Utica	81	x	666.67	x	.16067	=	8,676.22
Total Lost Property Taxes							$12,566.62

*Source: MVCC

**Rome undeveloped land is $4,000 true value per acre and is assessed at 80 percent of true value. $4,000 x .80 = $3,200.

Utica undeveloped land is $2,000 true value per acre and is assessed at 33.33 percent of true value. $2,000 x .3333 = $666.67.

BENEFITS OF FINANCIAL AID TO COUNTY RESIDENTS

A careful examination of financial aid to MVCC students shows that direct state and federal assistance which does not have to be repaid to its source covers the tuition paid by local students at the college. The New York State awards include grants for the Regents Scholarships and Tuition Assistance Program. These amount to $598,246 to cover tuition. Table 41 shows how the amount was derived.

TABLE 41

FINANCIAL AID TO ONEIDA COUNTY RESIDENTS

Source	Total Pay. To All Students	X	Fraction To Oneida Co. Students	=	Total Pay. To Oneida Co. Students
New York State					
Regents Scholarship	$ 40,500	X	1906/2933	=	$ 26,319
Tuition Assistance Program	880,096	X	1906/2933	=	571,927
Total New York Source					$598,246
Federal Government					
Basic Educational Opportunity Grant	$877,180	X	1906/2933	=	$570,032
Federal Nursing Scholarship	721	X	1906/1906	=	721
Law Enforcement Education Program	9,650	X	1906/2933	=	6,271
Supplement Education Grant	1,680	X	1906/1906	=	1,680
Veterans' Administration	$2,042,966	X	1906/1906	=	$2,042,966
Total Federal Source					$2,621,670
Total New York and Federal Sources of Financial Aid to Oneida County Residents					$3,219,916

The Federal Government programs, also listed in Table 41, include the Basic Educational Opportunity Grants and the Veterans Administration benefits. These five programs contribute $2,621,670 to local students. Added to the state contributions, the total of $3,219,916 exceeds the budgeted tuition of $2,915,724 for all students. Of the $2,915,724 in tuition collected from all students, it is estimated $1,977,823 is collected from Oneida County residents as depicted in Table 42.

TABLE 42

ESTIMATED TUITION PAID
BY MVCC STUDENTS

Full-Time Students	No. Students	X	No. Qtrs.	X	Qtrly. Tuition	=	Total
Original residents	1,906	X	3	X	$ 214	=	$1,223,652
Out-of-county residents	1,027	X	3	X	$ 214	=	659,334
Total Full-Time Students							$1,882,986

Part-Time Students	Total Part-Time Tuition	X	Fraction of P.T.Students		
Original residents	$1,032,738	X	2331/3192	=	$ 754,171
Out-of-county residents	$1,032,738	X	861/3192	=	278,567
Total Part-Time Students					$1,032,738

Estimated Tuition Paid by Oneida County Residents

full-time	$1,223,652
part-time	754,171
Total	$1,977,823

Thus it can be concluded that Oneida County residents gain $1,242,093 in tax free income from these assistance programs after tuition is paid to the college.

FREE SERVICES PROVIDED BY STUDENTS

Free services provided by MVCC students save local hospitals and agencies $140,582.50. Nursing students work an estimated 49,050 hours per year in various hospitals in the county as part of nurses' training. Likewise human services students are assigned to various Oneida County agencies for internships. It is estimated they work 4,000 hours per year. If these students were replaced by employees who were paid the minimum wage of $2.65 per hour, the cost would be $140,582.50 to replace the free services.

BENEFITS RESULTING FROM CAPITAL EXPENDITURES

The college's acquisition of capital assets such as buildings benefits the county in the same manner as a homeowner benefits from buying a house. But in the case of Oneida County, New York State makes a matching contribution which is free to the county. Table 43 shows the capital improvements since 1968.

TABLE 43
CAPITAL COSTS
TO ONEIDA COUNTY, 1977-78*

Original Campus (1960)	$100,512.50
Library - Payne Hall (1968)	77,195.00
Academic Building - Renovation (1971)	12,145.00
Student Union (1971)	58,825.00
Gymnasium Expansion (1977)	60,698.00
Total Capital Costs 1977-78	$309,375.50
Portion to Principal	$160,000.00
Portion to Interest	$149,375.50

*Dates in parentheses refer to the year of completion.

In the 1977-78 academic year, budgeted capital items cost the county $309,375.50 of which $357,041.97 was raised from charge-backs collected from other counties. Thus the county had $47,666.47 more than its share for capital items. Of the $309,375.50, $160,000.00 reduced the debt on the capital items and the remainder paid the interest on the debt.

Also it should be remembered that New York State makes a matching contribution for capital items. This benefit can be thought of as receiving an additional $160,000.00 at no cost to the county. Thus when both sources of funds are considered, the county improved its capital position by $320,000 without any cost to the county.

State University of New York
99 Washington Avenue
Albany, New York 12210

Office of the Vice Chancellor
Finance and Business

January 31, 1978

To: Community College Presidents and Business Officers
for Information Only
The following letter has been sent to County
Fiscal Officers

Dear Sir:

Re: Approved 1977-78 Operating Charge-back Rates for Community Colleges

Pursuant to the provisions of Subdivision four of Section 6305 of the Education Law, the following 1977-78 community college operating charge-back rates per full-time equivalent student have been approved:

College	Approved Operating Charge-back Rate per Full-time Equivalent Student
Adirondack Community College	$ 660-
Broome Community College	540-
Cayuga County Community College	630-
Clinton Community College	860-
Columbia-Greene Community College	930-
Community College of the Finger Lakes	780-
Corning Community College	1,000-
Dutchess Community College	840-
Erie Community College - City, North, and South	460-
Fashion Institute of Technology	1,550
Fulton-Montgomery Community College	1,220
Genesee Community College	1,000
Herkimer County Community College	550-
Hudson Valley Community College	750-
Jamestown Community College	620-
Jefferson Community College	690-
Mohawk Valley Community College	450-
Monroe Community College	740-
Nassau Community College	640-
Niagara County Community College	770-
North Country Community College	1,150-
Onondaga Community College	720-
Orange County Community College	800-
Rockland Community College	450-

Campus	Approved Operating Charge-back Rate per Full-time Equivalent Student
Schenectady County Community College	$ 710-
Suffolk County Community College - Eastern, Selden, and Western	470-
Sullivan County Community College	1,360-
Tompkins-Cortland Community College	620-
Ulster County	880

Sincerely,

Barry K. Spindler
Vice Chancellor for
Finance and Business

INFORMATION ABOUT THE AUTHORS

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